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09/614,617	07/12/2000	Jonathan D. Courtney	SUNIP505	2371

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EXAMINER

DEMICCO, MATTHEW R

ART UNIT	PAPER NUMBER
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2697

DATE MAILED: 07/31/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/614,617

Applicant(s)

COURTNEY ET AL.

Examiner

Matthew R Demicco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. The corrected or substitute drawings were received on 07/24/01. These drawings are acceptable for examination.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Figure 4, Elements 402, 404 and 406. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. ✓

### *Specification*

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. ✓

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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4. The disclosure is objected to because of the following informalities: On Page 14, Line 19, reference is made to elements 1530 and 1532 in Figure 8 which do not exist in the drawing.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-7, 10-13 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,459,427 to Mao et al.

Regarding Claim 1, Mao discloses a method of identifying a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining a locator adapted for identifying a data stream (Col. 8, Lines 9-19), associating the locator with one of a plurality of data streams (Col. 9, Lines 1-4), each one of the plurality of data streams being associated with one of a plurality of television channels (Col. 8; Lines 35-39), and mapping the locator to an IP address (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61).

Regarding Claim 3, Mao discloses a method as stated above in Claim 1 wherein creating a locator inherently comprises some manipulation of the software code (Col. 4, Line 30) on which the system is running. The use of an object-oriented programming

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language (Col. 9, Lines 19-21) for such software is well known in the art. In such a language, it is inherent that objects, such as variables and methods, are created. This reads on the claimed locator objected being instantiated.

Regarding Claim 4, Mao discloses a method as stated above in Claim 3. It is inherent in any type of computer programming that "objects" such as variables and methods take up space in memory. It is also well known that memory is finite, and therefore any objects must not be left "lying around" in memory and must be removed when no longer in use or else instability in the program may occur. This reads on the claimed "garbage collecting" of the locator object when it is no longer used.

Regarding Claim 5, Mao discloses a method as stated above in Claim 1, wherein each of the plurality of data streams is associated with the same one of the plurality of television channels (Col. 7, Lines 43-44).

Regarding Claim 6, Mao discloses a method as stated above in Claim 3. Mao discloses a method wherein each of a plurality of physical channels (Cols. 8-9, Lines 66-13) may contain a number of data channels (Col. 7, Lines 43-44). This reads on the claimed plurality of data streams are associated with two or more of the plurality of television channels (Col. 6, Lines 55-58).

Regarding Claim 7, Mao discloses a method as stated above in Claim 1, wherein each one of the data streams are associated with a single tuner (See Figure 6, 550). In the system of Mao, a single 6 MHz channel may carry the audio, video, and numerous data channels associated with the A/V channel.

Regarding Claim 10, Mao discloses a method of selecting a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining a data stream locator associated with a data stream (Col. 8, Lines 9-19), providing the data stream locator to an interface map (Col. 9, Lines 1-4 and Figure 5, 460-480), the interface map being adapted for mapping one or more data stream locators to one or more IP addresses (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61), and receiving an IP address associated with the data stream locator from the interface map (Col. 9, Lines 6-13).

Regarding Claim 11, Mao discloses a method of selecting a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining an IP address (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61), determining whether the IP address corresponds to a data stream locator associated with a data stream (Col. 8, Lines 9-19) and selecting the data stream associated with the data stream locator (Col. 9, Lines 6-13) when it is determined that the IP address corresponds to a data stream locator associated with a data stream (Col. 9, Lines 1-4).

Regarding Claim 12, Mao discloses a method as stated above in Claim 11 further comprising instructing a tuner to read the data stream associated with the data stream locator (See Figure 6).

Regarding Claim 13, Mao discloses a method as stated above in Claim 12 wherein instructing a tuner to read the data stream associated with the data stream locator comprises instructing a tuner that is tuned to the data stream (See Figure 6, 550) to read the data stream associated with the data stream locator (Col. 9, Lines 4-13).

Regarding Claim 22, Mao discloses a computer program product (Col. 4, Line 39) for selecting a data stream (See Figure 5, 500) comprising a computer-readable medium storing computer-readable instructions thereon (Col. 9, Lines 19-40). The instructions include instructions for obtaining an IP address, determining whether the IP address corresponds to a data stream locator associated with a data stream, and selecting the data stream associated with the data stream locator when it is determined that the IP address corresponds to a data stream locator associated with a data stream as stated above in Claim 11.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. in view of well known prior art.

Regarding Claim 2, Mao discloses a method as stated above in Claim 1. What is not disclosed, however, is that the IP address is generated from a set of IP addresses reserved for use in private networks. Official Notice is hereby taken that it is well known in the art to generate and assign private IP addresses (such as 192.168.0.0/16) in a private IP network. Further, the use of a well-known protocol such as Dynamic Host Configuration Protocol (DHCP) performs the task of selecting and assigning an IP

address from a set of reserved addresses for use in a private network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the DHCP-based IP assignment of the well-known prior art in order to simplify the delegation and management of a large number of private IP addresses in a private IP network.

Regarding Claim 9, Mao discloses a method as stated above in Claim 1. What is not disclosed, however, is that a private IP address is mapped to the locator. Mao in view of the well-known prior art disclose the use of the DHCP protocol to allocate a private IP address for use in a private IP network as stated above in Claim 2. The locator is mapped to an IP address as stated above in Claim 1. Mao in view of the well-known prior art would therefore teach the claimed allocating a private IP address to be mapped to the locator.

Regarding Claim 15, Mao discloses a method as stated above in Claim 11. Mao in view of the well-known prior art disclose the use of the DHCP protocol as stated above in Claim 2. DHCP, as is well known in the art, provides for releasing the IP address for future use with the IP address is no longer being used.

Regarding Claim 16, Mao discloses a method as stated above in Claim 11. Mao further discloses that an interface map is responsible for mapping one or more locator objects to one or more IP addresses (Col. 9, Lines 1-4 and Figure 5, 460-480), each of the locator objects being associated with a data stream (Col. 8, Lines 41-45). Further, Mao in view of the well-known prior art disclose the use of the DHCP protocol as stated above in Claim 2. DHCP, as is well known in the art, provides for releasing the IP address for



future use with the IP address is no longer being used. This reads on the claimed instructing the interface map to release the IP address for future use when the IP address is no longer being used.

9. Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. in view of U.S. Patent No. 6,510,557 to Thrift.

Regarding Claim 8, Mao discloses a method as stated above in Claim 1. What is not disclosed is that the plurality of data streams are associated with two or more tuners. Thrift discloses a Java-based television receiver (See Figure 1) that connects to the Internet (Col. 2, Line 39) and receives channel map information associating a given television channel signal with a URL (Col. 3, Lines 17-21). Further, Thrift discloses a channel map that associates channel number and URL (Col. 3, Lines 59-62). The system of Thrift also discloses the use of multiple tuner/decoders (Col. 3, Lines 7-8) to provide picture-in-picture display. Thrift is evidence that ordinary workers in the art would appreciate the usefulness of having two or more tuners in an interactive digital television receiver. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the multiple tuners of Thrift in order to display multiple channels of video and/or interactive data simultaneously.

Regarding Claim 14, Mao discloses a method as stated above in Claim 12. Further, Mao in view of Thrift disclose a method wherein a plurality of tuners are used to provide a picture-in-picture display. It is inherent in such a system that only one tuner is

used when a single channel is being displayed. When a second video or interactive data channel is requested simultaneously, the second tuner is then used. This reads on the claimed instructing a tuner that is currently unused to read the data stream associated with the data stream locator.

10. Claims 17-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. in view of U.S. Patent No. 6,580,722 to Perlman.

Regarding Claim 17, Mao discloses a method of selecting multicast IP data (Col. 5, Lines 32-53 and Cols. 7-8, Lines 63-3) transmitted in broadcast streams (Col. 4, Lines 38-46) comprising software (Col. 4, Line 30) capable of listening for multicast data. This software may be an object that is instantiated as stated above in Claim 3. Further disclosed is a method for specifying an IP address as stated above, that the tuner is instructed to read a data stream associated with the address from when the address corresponds to a data stream locator as stated above in Claim 13. If there is no embedded multicast data in a particular channel, it is inherent that the video program is displayed (See Figure 6, 560) without any supplemental data. This reads on the claimed otherwise instructing a network card (tuner) to read data from the network. What is not disclosed, however, is a method for specifying a multicast group address to listen in on and receive packets address to the multicast address or a method for specifying a multicast group address to specify a multicast group address associated with the IP address and receiving packets addressed to the multicast group address. Perlman discloses a method for multicasting data wherein a multicast group is address is specified in order to conserve

router resources (Col. 1, Lines 51-67). Specifically the amount of resources used by a router in a multicast group is limited by the size of the multicast group (Col. 3, Lines 34-37). Perlman is evidence that those of ordinary skill in the art would recognize that without using multicast address grouping, all nodes on a network would receive the multicast data, which would greatly increase the complexity and resource requirements for routing the data in a large network. It is inherent that such multicasting could be through an IP protocol as in Mao, and therefore the multicast group address would be associated with an IP address. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the multicasting group address of Perlman to conserve routing resources by directing multicasts to only specific nodes in a designated group. This reads on the claimed method for specifying a multicast group address associated with an IP address and receiving packets addressed to the multicast group address.

Regarding Claim 18, Mao in view of Perlman disclose a method as stated above in Claim 17. It is inherent in any type of computer programming that "objects" such as variables and methods take up space in memory. It is also well known that memory is finite, and therefore any objects must not be left "lying around" in memory and must be removed when no longer in use or else instability in the program may occur. This reads on the claimed "garbage collecting" of the multicast object when it is no longer used.

Regarding Claims 19 and 20, Mao discloses a method of selecting multicast IP data (Col. 5, Lines 32-53 and Cols. 7-8, Lines 63-3) transmitted in broadcast streams (Col. 4, Lines 38-46) comprising obtaining an IP address (Cols. 7-8, Lines 63-3 and Col.

6, Lines 58-61), determining whether the IP address corresponds to a data stream locator associated with a data stream (Col. 8, Lines 9-19) and selecting the data stream associated with the data stream locator (Col. 9, Lines 6-13) when it is determined that the IP address corresponds to a data stream locator associated with a data stream (Col. 9, Lines 1-4). Further disclosed is a method for specifying an IP address as stated above, that the tuner is instructed to read a data stream associated with the address from when the address corresponds to a data stream locator as stated above in Claim 13. If there is no embedded multicast data in a particular channel, it is inherent that the video program is displayed (See Figure 6, 560) without any supplemental data. This reads on the claimed otherwise instructing a network card (tuner) to read data from the network. What is not disclosed, however, is a method for specifying a multicast group address associated with the IP address and receiving packets addressed to the multicast group address. Perlman discloses a method for multicasting data wherein a multicast group address is specified in order to conserve router resources (Col. 1, Lines 51-67). Specifically the amount of resources used by a router in a multicast group is limited by the size of the multicast group (Col. 3, Lines 34-37). Perlman is evidence that those of ordinary skill in the art would recognize that without using multicast address grouping, all nodes on a network would receive the multicast data, which would greatly increase the complexity and resource requirements for routing the data in a large network. It is inherent that such multicasting could be through an IP protocol as in Mao, and therefore the multicast group address would be associated with an IP address. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

method of Mao with the multicasting group address of Perlman to conserve routing resources by directing multicasts to only specific nodes in a designated group. This reads on the claimed method for specifying a multicast group address associated with an IP address and receiving packets addressed to the multicast group address.

Regarding Claim 21, Mao in view of Perlman disclose a method of selecting multicast IP data transmitted in broadcast streams as stated above in Claim 19. Further, Mao discloses obtaining an IP address, the IP address having an associated data stream locator as stated above in Claim 11. Mao also discloses instructing a tuner to read a data stream associated with the data stream locator as stated above in Claim 12. Mao in view of Perlman also disclose specifying a multicast group address associated with the data stream and receiving packets addressed to the multicast group address as stated above in Claim 19.

Regarding Claim 23, Mao in view of Perlman disclose a digital television receiver (See Figure 1, 150) for selecting multicast IP data transmitted in broadcast streams at stated above. Mao further discloses a computer-based architecture for implementing the receiver on (Col. 9, Lines 19-40). It is inherent that such a computer-based system has a processor and a memory for storing instructions thereon. Further, Mao in view of Perlman disclose obtaining an IP address, the IP address having an associated data stream locator, instructing a tuner to read a data stream associated with the data stream locator, specifying a multicast group address associated with the data stream, and receiving packets addressed to the multicast group address as stated above.

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*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 5,982,411 to Eyer et al. discloses an interactive television system where data is provided with broadcast signals to indicate addressing information corresponding to channel groups.
- b. U.S. Patent Application Publication No. 2002/0038383 to Ullman et al. discloses a system for integrating video programming with the Internet using embedded URLs and a Java-enabled browser.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew R Demicco whose telephone number is (703) 305-8155. The examiner can normally be reached on Mon-Fri, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5359 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



mrd  
July 23, 2003

  
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